

# Decision Memo

## McDougal Springs Meadow Restoration Project

U.S. Forest Service  
Williams Ranger District, Kaibab National Forest  
Coconino County, Arizona

### Background

The Kaibab National Forest (NF), Williams Ranger District proposes a meadow restoration project northwest of McDougal Springs near the intersection of Forest Service Road (FSR) 110 and FSR 705. Activities proposed to restore the meadow include installing grade control structures (GCS) (i.e. loose rock structures) to improve surface water flow by dissipating energy, stabilizing meadow soils and removing encroaching trees. This project area will include meadow restoration activities on approximately 23 acres of National Forest System (NFS) lands.

Soil erosion and channel incision can occur rapidly through deep, soft soils (mollisols) such as those found in this meadow. Meadow systems on the Kaibab NF do not generally support channelized flow, but instead have dispersed flows across the meadow. Dispersed flows tend to move slowly, with low erosive force, and promote infiltration and percolation of runoff into the deep meadow soils.

There is a need to improve the hydrologic function of this degraded meadow to reduce soil loss and prevent drying of the meadow that results from channelized flow. Installation of grade control structures will reduce runoff velocities and increase flow dispersal, allowing water to infiltrate and percolate into the meadow soils, thereby increasing water storage in the meadow. Removal of conifer trees will increase availability of sunlight, nutrients and water for native grasses within the meadow, allowing native grass species to thrive, thereby increasing soil stability and reducing erosion and runoff.

### Legal Description:

The legal description for the project location is SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  Section 6 and E  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of Section 7, Township 20 North, Range 3 East, Gila and Salt River meridian. See Figure 3 below for the vicinity of map of the project area.

### Proposed Action

Meadow restoration actions will be implemented by work crews with supervision by Kaibab NF. Hand tools and mechanized equipment (such as UTVs and chainsaws) may be used. To ensure there are no negative impacts from mechanized equipment, best management practices (BMPs) have been added to this proposed action.

Removal of encroaching conifer trees will occur. Any project slash that can be incorporated into the project as a GCS will be used. If there is slash that is not used, it will either be lopped and scattered with

the potential to broadcast burn or piled and burned at a later date. The amount of material that will be remaining after the GCSs are in place will be minimal reducing the overall material to be placed outside the meadow. No pre-settlement trees will be removed from the project area. All trees that will be removed are approximately 9 inch diameter at breast height or less, and not more than 25 feet tall.

The intent of this project is to improve the hydrologic regime throughout the meadow system by dissipating flow energy in the ephemeral drainages that run through the meadow. Flow energy dissipation will reduce scour, erosion, channel incision and overall sediment transport throughout the meadow. Sediment will be stored within the above grade control structure and infiltration will be improved. Improved wetting of the meadow will mitigate future encroachment of conifers within the meadow reducing the need for perpetual maintenance. Stressors that likely contribute to the degradation of this meadow (which facilitated encroachment by conifers) may still exist in the project area.

The types of grade control structures that may be used for this project are described below. These types of grade control structures have been successfully implemented across public lands in the west and more recently on the Coconino National Forest. Supporting documentation for this project can be found in the project record at the Williams Ranger District Office upon request.

### One-Rock Dams

This grade control and energy dissipation structure is constructed with a single layer of rock across the channel bed. The structure creates an artificial riffle in the channel. The structure extends up the banks of the channel, at least to the bankfull elevation. They increase channel stability and decrease erosion and scour (in-channel erosion) by reducing water velocity and storing moisture in the inner spaces of rocks, providing suitable sites for vegetation to re-establish, which further increase channel stability and erosion resistance. See Figure 1.

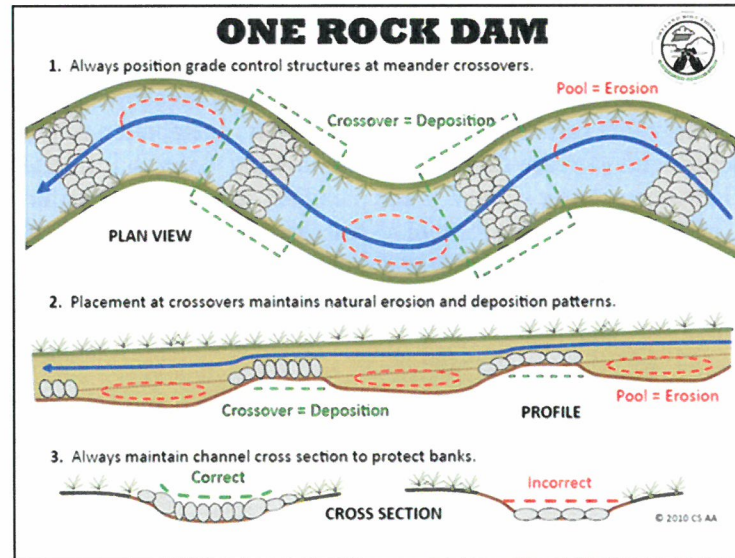


Figure 1: Diagram of One Rock Dam.

### Zuni Bowl

where a steep portion of the channel exists, stabilization of existing headcuts will involve the use of angular rock, typically ranging in size from 4 to 18-inches to construct rock bowls to provide protection from erosive water flow. This headcut stabilization method will require hand crews to complete the work. The structure allows for energy dissipation without erosion by creating a step fall and plunge pool. See Figure 2.



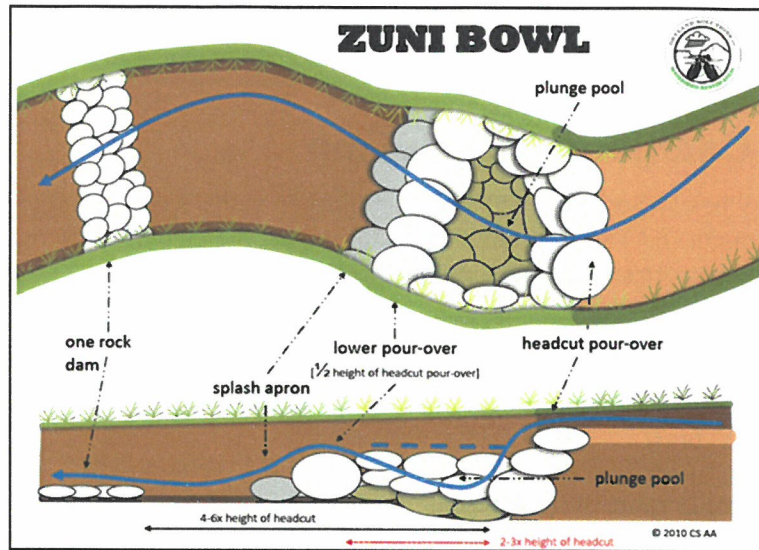


Figure 2: Diagram of a Zuni Bowl.

### Best Management Practices

Several best management practices have been included in the proposed action. These include:

- All disturbed areas will be seeded with an approved native seed mix or mulched with a weed free mulch as needed. Revegetation and use of mulch will protect disturbed areas from scour and erosion.
- Best Management Practices as outlined in Appendix B of the "Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds" (USDA 2005) will be followed to incorporate weed prevention and control into the project.
- Any heavy equipment will be inspected and cleaned before entering the project area to prevent introduction of invasive weeds.
- Noxious or invasive weed populations will be monitored and treated following project implementation if infestations expand or if new noxious or invasive weeds are detected in the project area.
- Motorized use associated with restoration activities will be kept on designated and existing administrative routes except where needed for transport of materials and installation of channel structures.
- Operation equipment within the meadow when ground conditions are such that soil rutting, compaction or puddling will be avoided.
- Hauling and use of heavy equipment on forest roads will be restricted during wet weather road restrictions.

### Decision & Rationale

I have decided to approve the McDougal Springs Meadow Restoration Project located on the Williams Ranger District, on the Kaibab NF. This project is categorically excluded using category 36 CFR 220.6 (e)(18).

My decision is based on my review of the documents provided in the project record which are based on the internal and external scoping conducted over the course of the projects planning; because of this, I



find no extraordinary circumstances exist that would warrant further analysis and documentation in an Environmental Assessment (EA) or an Environmental Impact Statement (EIS).

## Reasons for Categorical Exclusion

A proposed action may be categorically excluded from further analysis and documentation in an Environmental Assessment (EA) and the Environmental Impact Statements (EIS) only if there are no extraordinary circumstances related to the proposed action and if:

- (1) The proposed action is within one of the categories established by the Secretary at 7 CFR part 1b.3; or
- (2) The proposed action is within a category listed in sections 220.6 (d) and (e). (36 CFR 220.6(a))

The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion (CE). It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determine whether extraordinary circumstances exist (36 CFR 220.6(b)).

In considering extraordinary circumstances, the responsible official should determine whether or not any of the listed resources are present, and if so, the degree of the potential effects on the listed resources. If the degree of potential effect raises uncertainty over its significance, then an extraordinary circumstance exists, precluding use of a categorical exclusion (FSH 1909.15, Chapter 30, Part 31.1 and 31.2).

The proposed action is within the category listed per 36 CFR 220.6(e) (18), as indicated below:

*“Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, valves, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practicable where valid existing rights or special use authorizations are not unilaterally altered or canceled.” (36 CFR 220.6(e) (18)).*

In making this determination, I took into account the following resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

### **A. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.**

There are no federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species for the wildlife resource.

There are no federally listed threatened, endangered, candidate, conservation agreement, proposed plant species or critical habitat occur within the project area. If there is a plant species found during implementation, it will be flagged and avoided.

### **B. Floodplains, wetlands or municipal watersheds.**



There are no FEMA floodplains, wetlands, or municipal watersheds within the project area.

**C. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas.**

There are no congressionally designated areas such as wilderness, wilderness study areas, or National Recreation Areas within the project area.

**D. Inventoried roadless areas.**

There are no inventoried roadless areas within the project area.

**E. Research natural areas.**

This area is not designated as a research natural area.

**F. American Indians and Alaska Native Religious or Cultural Sites.**

There are no American Indians and Alaska Native Religious or Cultural Sites within the proposed project area.

**G. Archaeological sites or historic properties or areas.**

The entire proposed project area was previously surveyed and there are no cultural resources that will be affected. This is documented in Cultural Clearance report number R201903070023.

No extraordinary circumstances were found in the project area.

## Public Involvement

An interdisciplinary team consisting of archaeology, timber, soils and watershed, wildlife, and botany and invasive weeds reviewed the project on October 01, 2019. No issues were identified by the above mentioned resource areas. The McDougal Springs Meadow Restoration Project was sent out for a 14-day public scoping period on January 7, 2020. The Kaibab NF received one comment on the project from the Sierra Club-Grand Canyon Chapter. Concerns presented in the comment letter have been addressed throughout this document.

## Findings Required By Other Laws and Regulations

My decision is in accordance with all applicable laws, regulations, policies, and plans. This project is consistent with the following:

National Forest Management Act (NFMA) – NFMA requires the development of long-range land and resource management plans. The Kaibab National Forest Plan was approved in 2014, as required by this Act. The Plan has been reviewed in consideration of this project. This decision is responsive to the guiding direction contained in the Forest Plan. This Decision Memo is consistent with standards and guidelines contained in the Forest Plan.



Wetlands and Floodplains (Executive Orders 11988, 11990) – No municipal watersheds exist within the project area.

Multiple-Use Sustained-Yield Act– The Multiple-Use Sustained-Yield Act of 1960 states that it is the policy of Congress that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, wildlife, and fish purposes, and authorizes and directs the Secretary of Agriculture to develop and administer the renewable surface resources of the National Forests for the multiple use and sustained yield of products and services.

National Environmental Policy Act (NEPA) – NEPA requires public involvement and consideration of potential environmental effects. This document and the project record provide documentation for this decision, which assures compliance with this Act.

National Historic Preservation Act (NHPA)--The primary legislation governing cultural resource management in the Forest Service is the National Historic Preservation Act (NHPA) of 1966 as amended. Section 106 of NHPA requires Federal agencies to take into consideration the effects of their undertakings on properties listed in or eligible for the National Register of Historic Places. Federal Regulations 36 CFR 800 contains procedures for implementing Section 106.

## Administrative Review Opportunities

As a result of Section 431 of the Consolidated Appropriations Act of 2014 and Section 8006 of the 2014 Farm Bill, the Forest Service will no longer offer notice, comment, post-decisional appeal, and pre-decisional objection opportunities pursuant to 36 CFR 218 for categorically-excluded projects.

These legislative changes and new direction do not limit the public's ability to comment on Forest Service projects and activities. The Forest Service will continue to offer public involvement opportunities for categorically excluded projects as provided for in its NEPA procedures found in 36 CFR 220.

## Implementation Date

Implementation of this project is dependent upon funding and could begin as early as spring of 2020.

## Project Contact

For additional information on this project contact Micah Kiesow, Soil Scientist, Kaibab NF, Supervisor's Office, 800 South 6<sup>th</sup> St, Williams, AZ 86046, (928) 635-8354.

*Debra Mollet*

DEBRA MOLLET

District Ranger, Williams and Tusayan Ranger Districts

*2/28/2020*

Date



## USDA Non-Discrimination Policy Statement

### [DR 4300.003 USDA Equal Opportunity Public Notification Policy \(June 2, 2015\)](#)

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [http://www.ascr.usda.gov/complaint\\_filing\\_cust.html](http://www.ascr.usda.gov/complaint_filing_cust.html) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov).

USDA is an equal opportunity provider, employer and lender.



## Map of Project Area:

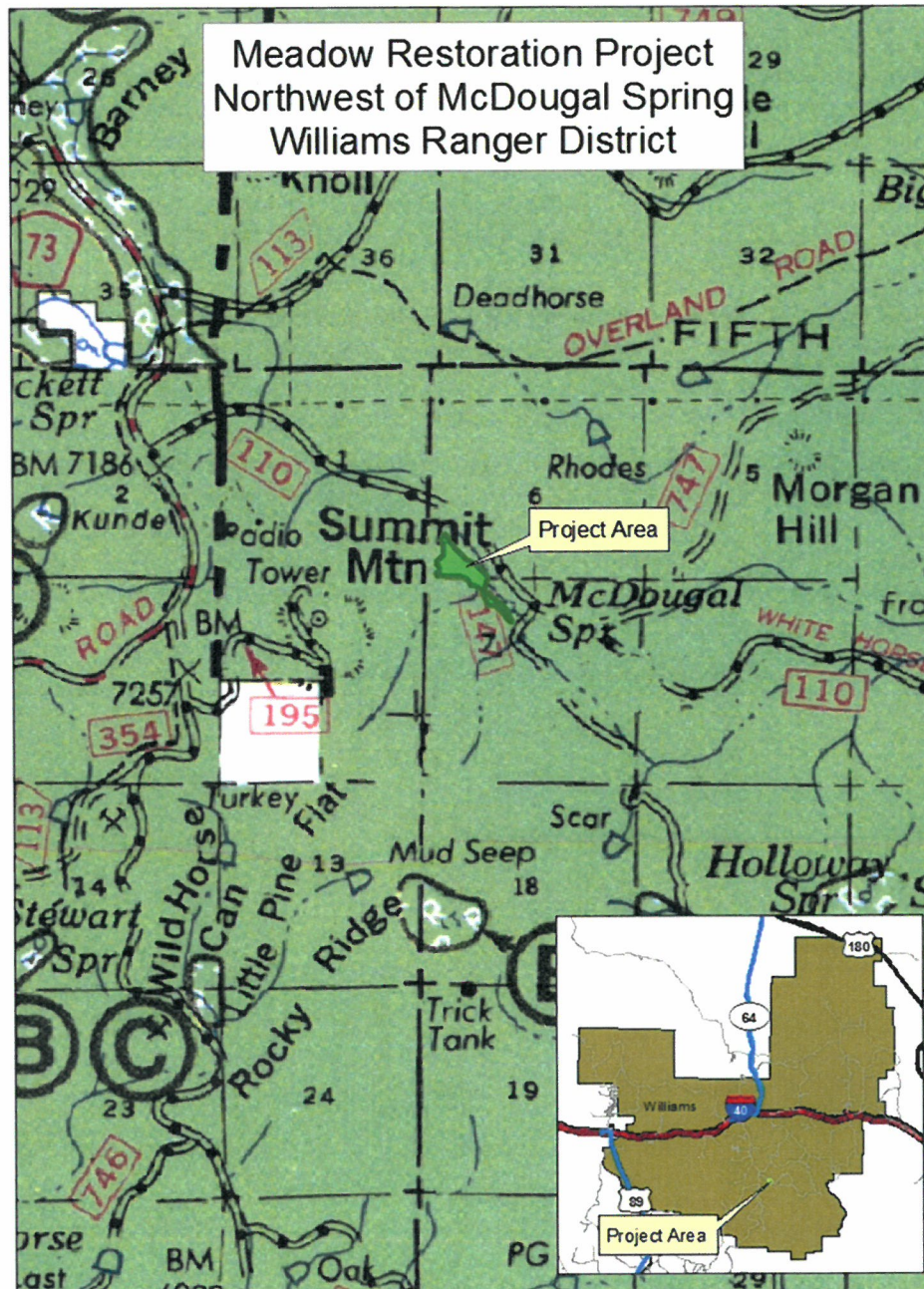


Figure 3: Meadow Restoration Project Vicinity Map